

# High-level Gentamicin Resistance Among *Enterococci* Isolated from Meat Purchased from Grocery Stores and from Outpatient Human Stools - United States, 1998-2001

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**Background:** *Enterococci* are an important cause of hospital infections. High-level gentamicin resistance (HLGR) can complicate treatment, especially among patients with heart valve infections. In the United States, gentamicin is used in certain food animals, particularly chickens, turkeys and pigs, but is not frequently used in cattle. To examine the prevalence of HLGR among *enterococci* from food, we cultured isolates obtained from meat and poultry purchased from grocery stores and compared these data to isolates obtained from outpatient human stools.

**Methods:** Laboratories in five states cultured *enterococci* on media containing gentamicin at concentrations of 100µg/ml. Isolates were forwarded to CDC for species identification and confirmatory antimicrobial susceptibility testing using continuous gradient concentration strips. Using these methods, HLGR was defined as minimum inhibitory concentration (MIC) of gentamicin >500 µg/ml. We analyzed isolates of *enterococci* submitted between 1998 and 2001.

**Results:** *Enterococci* with HLGR were cultured from 72% (295/407) of chicken samples, 24% (143/596) of pork samples, and 4% (7/162) of beef samples (all p values by pairwise comparison <0.001). HLGR *enterococci* were cultured from 2% (39/1899) of human outpatient stool samples.

**Conclusions:** HLGR was most common among *enterococci* isolated from chicken, less so from pork samples, and rare among isolates from beef. HLGR *enterococci* were also present in human stools. Such resistance may complicate the treatment of serious enterococcal infection. Additional studies are needed to further evaluate the reasons for the very high prevalence of HLGR in *enterococci* from chicken samples and the relationship between isolates from animals and those from humans.

**Key words:** *Enterococcus*, antimicrobial resistance, gentamicin, human, chicken

## Suggested citation:

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